REMARKS

In the July 12, 2005 Office Action, claims 1-18 were rejected and claims 19-21 were withdrawn from consideration. This Response amends claims 1, 6-12, 15, and 16 to correct typographical errors and to clarify certain aspects of the claimed invention. After entry of the foregoing amendments, claims 1-18 (18 total claims; 2 independent claims) remain pending in the application. Reconsideration of the application is respectfully requested in view of the above amendments and the following remarks.

§112 Rejection

Claims 6-8 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Applicant submits that this rejection is erroneous and that the language of claims 6-8 is definite as written. Due to an inadvertent typographical error, however, original claims 6-8 were written to be dependent upon claim 1 rather than claim 4. Accordingly, the Office Action should have objected to claims 6-8 as having improper dependencies, and Applicant respectfully requests the Office to retract the §112 rejection. Regardless, these claims have been amended to properly depend from claim 4 and, therefore, they are no longer objectionable.

§102 Rejections

Claims 1, 9, and 10 stand rejected under 35 U.S.C. §102(b) as being anticipated by Wycech, USPN 6,287,666 (hereinafter "Wycech"). Applicant respectfully traverses this rejection.

Wycech discloses an automotive bumper having a channel shaped structure that includes an outer wall, an inner shell, and foam between the outer wall and inner shell. The inner shell is arched in a direction that opposes the anticipated impact force; this arch provides additional directional rigidity and resistance to bending caused by such impact. FIG. 2 of Wycech is representative of this bumper structure. The Office Action states that the combination of the wall and the foam reads on the "non-solid composite section" recited in claim 1, and that the outer shell reads on the "solid section" recited in claim 1. As best understood, the Office Action also alleges that the arched shape of the Wycech bumper anticipates the radiused interface recited in claim 1.

Claim 1 now recites that the non-solid composite section includes a tapered transition section, that the solid section extends away from the tapered transition section, that the interface

of the structural foam and the solid section is located proximate an end of the tapered transition section, and that the interface is shaped such that the structural foam protrudes into the solid section. No new matter has been introduced, and Applicant's original specification provides support for the amendment to claim 1 (see, for example, FIGS. 4-8).

Wycech does not disclose or suggest the use of a tapered transition section, and the outer shell of Wycech does not extend away from a tapered transition section. Moreover, Wycech does not disclose or suggest a radiused interface that is shaped such that the structural foam protrudes into the inner shell. Rather, the inner shell of Wycech actually forms a hollow element rather than a solid element. Regardless, the foam layer of Wycech does not protrude into a solid section as recited in claim 1.

For at least the above reasons, independent claim 1 and claims 9 and 10, which variously depend from claim 1, are not anticipated by Wycech. In addition, Wycech does not teach or suggest that the interface between the foam and the inner shell forms a bullnose shape having two different radii, as recited by claim 10. Therefore, Applicant requests the withdrawal of the §102 rejection of claims 1, 9, and 10.

Claims 1, 4, and 5 stand rejected under 35 U.S.C. §102(e) as being anticipated by Gigiakos, USPA 2004/0111997 (hereinafter "Gigiakos"). Applicant respectfully traverses this rejection.

Gigiakos discloses a wall panel system for joining foam wall panels together. The foam wall panels are joined together using Z-shaped wall panel connection devices. FIGS. 2-4 depict, from a top view, how two foam panels are jointed with a Z-shaped device, and FIG. 5 is a top view of an assembled wall. The Office Action merely concludes, without any detailed analysis of the Gigiakos disclosure, that Gigiakos anticipates the invention of claims 1, 4, and 5. Applicant disagrees with this conclusion.

The Office Action does not specify which elements in Gigiakos allegedly read on the recited limitations, which makes it difficult for Applicant to address this rejection. As best understood, Gigiakos does not include a "solid section" coupled to a "non-solid composite" section as recited in claim 1. Rather, the entire wall system of Gigiakos is a composite structure. Moreover, the wall system does not include a tapered transition section of the non-solid composite section, or a foam interface that protrudes into the solid section.

For at least the above reasons, independent claim 1 and claims 4 and 5, which variously depend from claim 1, are not anticipated by Gigiakos. Therefore, Applicant requests the withdrawal of the §102 rejection of claims 1, 4, and 5. Should the Office maintain this rejection, Applicant respectfully requests the Office to provide a detailed explanation of how Gigiakos anticipates each and every limitation recited in claims 1, 4, and 5.

§103 Rejections

Claims 1, 2, and 4-18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Sutherland, USPN 6,723,012 (hereinafter "Sutherland") in view of Wycech. Applicant traverses this rejection.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify a reference or to combine the teachings of multiple references. Second, there must be a reasonable expectation of success. Third, the prior art must teach or suggest all of the recited claim limitations. Of course, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. Applicant respectfully submits that the Examiner has not met all of the above criteria.

Sutherland discloses a composite baseball bat construction. Sutherland discloses that the handle section of the bat may be solid, and that the barrel section of the mat may be a hollow foam-filled construction. The Office acknowledges that Sutherland does not disclose the use of a curved interface between the foam and a solid section, but contends that Wycech provides this missing element. Wycech was discussed in detail above.

As an initial matter, the proposed combination of Sutherland and Wycech neither includes nor suggests each and every element of independent claim 1, for the reasons discussed above in connection with the §102 rejection over Wycech. In addition, the Sutherland bat does not include any section (solid or otherwise) "for providing an area for structural attachment" to the bat. Indeed, in normal use a baseball/softball bat is never structurally attached to anything and, therefore, it need not be configured as recited in Applicant's claims. Regarding independent claim 11, the proposed combination of references neither includes nor suggests the use of a radiused foam-solid interface located within a transition section that couples the solid

section to the non-solid composite section. In other words, Applicant's claimed invention would not result from the proposed combination.

Furthermore, there is no suggestion or motivation to combine Sutherland with Wycech. The Office Action acknowledges that Sutherland and Wycech describe completely nonanalogous art, however, the Office Action also contends that Wycech is pertinent to the problem addressed by Applicant's invention. Applicant respectfully disagrees with this allegation, and submits that one skilled in the art would not have been motivated to combine these references.

Wycech is directed to a channel-shaped structural member (e.g., for a vehicle bumper) designed to withstand side impacts and to resist bending about its longitudinal axis. Foam is located within the channel structure to provide increased stiffness and resistance to bending. Wycech employs an inner shell that is arched in a direction opposite that of the force to which the bumper is subjected (Column 2, Lines 31-36). This is clearly depicted in FIGS. 1-2 of Wycech. In contrast, a structure embodying Applicant's invention utilizes the solid section for attachment to another structure because the composite section may not be suitable for such attachment. In other words, Applicant's non-solid composite section is not intended to withstand side impacts (which is a critical function of the baseball bat disclosed by Sutherland and the vehicle bumper disclosed by Wycech). Moreover, Applicant's invention addresses the issue of delamination or cracking of the internal foam-solid interface, while Wycech is specifically directed to the problem of increased structural strength and resistance to bending of the bumper itself. Contrary to the statement made in the Office Action, Wycech is not related to "the formation of the curved surface at the interface section to reduce the stress." Again, one skilled in the art would not look to the teaching of Wycech or Sutherland to provide features suitable for incorporation into a composite structural material as claimed by Applicant. Thus, there is no suggestion or motivation to form the proposed combination of references.

For at least the above reasons, independent claims 1 and 11, and the respective dependent claims 2, 4-10, and 12-18, are not unpatentable over Sutherland in view of Wycech, and Applicant requests the withdrawal of the §103 rejection of those claims.

Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Sutherland in view of Wycech and further in view of Filice et al., USPN 6,334,824 (hereinafter "Filice").

Claim 3 depends from claim 1. For the same reasons discussed above, claim 3 is not unpatentable over the base combination of Sutherland in view of Wycech, and Filice does not compensate for the shortcomings of Sutherland and Wycech. Consequently, Applicant also requests the withdrawal of the §103 rejection of claim 3.

In conclusion, for the reasons given above, all claims now presently in the application are believed allowable and such allowance is respectfully requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the undersigned attorney at (480) 385-5060.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

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